SYSTEMS AND METHODS TO FACILITATE
GAMES OF SKILL FOR PRIZES PLAYED VIA
A COMMUNICATION NETWORK

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation-in-part of:

5   U.S. Patent Application Serial No. 08/561,668, entitled "REMOTE AUDITING OF COMPUTER GENERATED OUTCOMES AND AUTHENTICATED BILLING AND ACCESS CONTROL SYSTEM USING CRYPTOGRAPHIC AND OTHER PROTOCOLS" and filed on November 22, 1995, issued on June 16, 1998 as U.S. Patent No. 5,768,382;

and is a continuation-in-part of: U.S. Patent Application Serial No. 08/624,998, entitled "OFF-LINE REMOTE SYTEM FOR LOTTERIES AND

10   GAMES OF SKILL" and filed on March 29, 1996, issued on February 16, 1999 as U.S. Patent No. 5,871,398, which is a continuation-in-part of: U.S. Patent Application Serial No. 08/497,080, entitled "OFF-LINE REMOTE LOTTERY SYSTEM" and filed on June 30, 1995 and abandoned on July 16, 1998;

and is a continuation-in-part of U.S. Patent Application Serial No.

15   08/677,544, entitled "REMOTE-AUDITING OF COMPUTER GENERATED OUTCOMES, AUTHENTICATED BILLING AND ACCESS CONTROL, AND SOFTWARE METERING SYSTEM USING CRYPTOGRAPHIC AND OTHER PROTOCOLS" and filed on August 8, 1996, issued on October 19, 1999 as U.S. Patent No. 5,970,143, which is a continuation-in-part of U.S. Patent Application

20   Serial No. 08/561,668, entitled "REMOTE AUDITING OF COMPUTER GENERATED OUTCOMES AND AUTHENTICATED BILLING AND ACCESS CONTROL SYSTEM USING CRYPTOGRAPHIC AND OTHER PROTOCOLS" and filed on November 22, 1995, issued on June 16, 1998 as U.S. Patent No. 5,768,382;

and is a continuation-in-part of: U.S. Patent Application Serial No.
08/635,576, entitled "DATABASE DRIVEN ONLINE DISTRIBUTED
TOURNAMENT SYTEM" and filed on April 22, 1996, issued on July 14, 1998 as
U.S. Patent No. 5,779,549. The entire contents of these applications are
5   incorporated herein by reference.

FIELD

The present invention relates to games. In particular, the present invention
relates to systems and methods to facilitate games of skill for prizes played via a
communication network.

10   BACKGROUND

Many people enjoy playing games. For example, many people enjoy
playing games of chance, trivia games, puzzle games, and arcade-style games (*e.g.*,
games in which a player collects points as he or she maneuvers a character across a
landscape or through a maze). One reason a player may enjoy playing a game is
15   that he or she finds it entertaining to play the game according to a set of rules
associated with the game. For example, a player may enjoy trying to solve a
picture puzzle according to a particular set of rules. Another reason may be that he
or she enjoys achieving a successful game result (*e.g.*, by completing a crossword
puzzle). The way a game is presented, the complexity of game rules, and the
20   likelihood of achieving a successful game result can all contribute to whether or
not players will find the game entertaining and enjoyable.

Many players especially enjoy playing "online" games, such as games
played by communicating with a game provider via a communication network.
For example, a player may use his or her Personal Computer (PC) to communicate
25   with an online game provider through the Internet. With online games, a player
can decide when and where a game will be played. For example, the player may

decide to play a game while at his or her home or office, or even while traveling. This flexibility is one reason why so many players enjoy playing online games.

To increase interest in a game, an online game provider can arrange for some players to receive prizes. For example, a game provider may arrange a

5   tournament in which multiple players compete against each other. In this case, players may be required to provide entry fees in exchange for participating in the tournament, and some or all of the entry fees can then be awarded to a player based on his or her relative performance as compared to other players (*e.g.*, fifty percent of the entry fees can be awarded to the best player in a tournament).

10   Some online game providers also arrange for players to receive prizes in non-tournament games, such as online casinos that arrange for players to receive prizes in games of chance. For example, players may be allowed to place bets with an online casino, and prizes may be awarded to players based on game results that are randomly determined by the online casino. Popular games of chance include

15   slot machine games, roulette games, and card games (*e.g.*, blackjack games and poker games).

However, games of chance for prizes are often regulated, or even prohibited, by governmental authorities. For example, a particular country, or region within a country, may completely prohibit a game provider from collecting

20   payments from players and awarding prizes to players based on game results that are generated in a predominantly random manner (*i.e.*, by prohibiting "gambling").

To avoid such problems, a game provider may instead arrange for players to play games of "skill" in which a game result is determined predominantly a player's performance. For example, many people enjoy playing computer-based

25   simulated golf games. In this case, a player provides one or more input parameters (*e.g.*, a speed and angle associated with a swing of a simulated golf club), and a trajectory is calculated for a simulated golf ball based on the input parameters. A game result is then determined, and a successful game result may indicate, for example, that the simulated golf ball has come to rest within a predetermined

30   distance of a simulated golf hole.

It is known that a game provider can award prizes to players to who play games of skill. For example, a game provider may award a five dollar gift certificate to any player who shoots a hole-in-one during a computer-based simulated golf game. Prizes can similarly be awarded in other types of games of
5   skill, including trivia games, word-puzzle games, and arcade-style games. For example, a game provider may award a prize to any player who scores at least 5,000 points in a trivia game. Typically, however, players do not provide payments in exchange for playing games of skill. Thus, the prizes that are awarded are generally for lower amounts (*e.g.*, under ten dollars) and/or are less frequent
10   (*e.g.*, to one player out of ten thousand) as compared to games of chance.

A number of other problems may arise when a game provider arranges for players to play a game of skill. For example, players may become frustrated if a level of skill required to succeed in a game is too high. In this case, a player may feel that the game provider is being unfair because he or she cannot realistically
15   achieve a successful game result. As a result, players may stop playing the game – especially if they are required to provide payment in exchange for playing the game.

Another problem that can arise when a game provider arranges for players to play a game of skill is that some players may dominate game play. Consider,
20   for example, a player who is, or becomes, an "expert" at a game of skill. Such an expert player may frequently be able to receive a prize by achieving a particular game result. If he or she continually plays the game, the game provider may eventually award a large number of prizes (and provide payment of a significant total prize amount) to the expert player. In fact, the game provider may find itself
25   awarding a larger amount than it receives from players (*e.g.*, especially if the prize amounts are large or if there are a large number of expert players). To avoid losing money, the game provider may attempt to increase the payments that players provide in exchange for game play. However, the non-expert players, who in effect would now be subsidizing the expert players, may stop playing the game.
30   Instead of increasing payments received from players, the game provider may attempt to the reduce prize amounts that are provided to players. This, however,

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may make the game less enjoyable and cause non-expert players to stop playing the game.

In addition to the expert player problem, a game provider may find that some players use automated game playing devices to unfairly achieve game results. That is, a player may alter a game program or develop a supplemental program to provide an unfair advantage during game play. For example, an automated game playing device may unfairly determine and display supplemental information to a player, such as a path through a maze that has been calculated by the automated game playing device. Players who use these types of automated game playing devices will cause many of the problems discussed above with respect to expert players (*e.g.*, the game provider may lose money and/or players who do not use automated game playing devices may stop playing the game).

The problems associated with expert players and/or players who use automated game playing devices may be particularly prevalent when a game provider awards prizes to players based on game results. That is, the prizes may encourage expert players more than non-expert players (who are less likely to win the prizes) as well as motivate some players to create and/or use automated game playing devices. Similarly, these problems may be more common with respect to online games. For example, automated game playing devices may be more easily created and/or used in an online environment.

SUMMARY

To alleviate problems inherent in the prior art, the present invention introduces systems and methods to facilitate games of skill for prizes played via a communication network.

According to one embodiment, a fee is received from a player to play a game of skill. A player input parameter is received from a remote player device via a communication network, and a game result is determined based on the player input parameter and the game of skill. According to this embodiment, the game of

skill inhibits performance of an automated game playing device by determining the game result in part based on a value that is not transmitted to the remote player device. A prize may then be provided to the player based on the game result.

According to another embodiment, a fee is received from a player to play a game of skill associated with a physics simulation. A value associated with the physics simulation is determined without communicating the value to a remote player device, and a player input parameter is received from the remote player device via a communication network. A game result is then determined based on (i) the received player input parameter and (ii) the value associated with the physics simulation. A prize may then be provided to the player based on the game result.

One embodiment of the present invention comprises: means for receiving from a player a fee to play a game of skill; means for receiving a player input parameter from a remote player device via a communication network; means for determining a game result based on the player input parameter and the game of skill, wherein the game of skill inhibits performance of an automated game playing device by determining the game result in part based on a value that is not transmitted to the remote player device; and means for providing a prize to the player based on the game result.

Another embodiment comprises: means for receiving from a player a fee to play a game of skill associated with a physics simulation; means for determining a value associated with the physics simulation without communicating the value to a remote player device; means for receiving a player input parameter from the remote player device via a communication network; means for determining a game result based on (i) the received player input parameter and (ii) the value associated with the physics simulation; and means for providing a prize to the player based on the game result.

With these and other advantages and features of the invention that will become hereinafter apparent, the invention may be more clearly understood by

reference to the following detailed description of the invention, the appended
claims, and the drawings attached herein.

BRIEF DESCRIPTION OF THE DRAWINGS

5   FIG. 1A is a block diagram overview of a game system according to an
embodiment of the present invention.

FIG. 1B is a block diagram overview of a game system according to
another embodiment of the present invention.

FIG. 2 is a block diagram of a player device according to an embodiment of
the present invention.

10   FIGS. 3 through 5 illustrate player devices according to some embodiments
of the present invention.

FIG. 6 is a block diagram of a game controller according to an embodiment
of the present invention.

FIG. 7 is a tabular representation of a portion of a player database
15   according to an embodiment of the present invention.

FIG. 8 is a tabular representation of a portion of a game play database
according to an embodiment of the present invention.

FIG. 9 is a tabular representation of a portion of a game database according
to an embodiment of the present invention.

20   FIG. 10 is a flow chart of a method for facilitating game play according to
an embodiment of the present invention.

DETAILED DESCRIPTION

Embodiments of the present invention are directed to systems and methods
to facilitate games of "skill" for prizes that are played via a communication

network. As used herein, the phrase "game of skill" refers to any game in which a game result is determined based predominantly on a player's skill (*e.g.*, as demonstrated by his or her performance) as opposed to chance. Note that the game result may also be based in part on chance (*e.g.*, a randomly generated value).

5   Moreover, as used herein, a "prize" may be any benefit that can be awarded to a player. By way of example, a prize may be a payment of a monetary amount or an alternate currency (*e.g.*, a gift certificate).

Game System Overview

Turning now in detail to the drawings, FIG. 1A is a block diagram of a
10   game system 100 according to one embodiment of the present invention. The game system 100 includes a game controller 600 in communication with a number of player devices 200. Note that although a single game controller 600 is shown in FIG. 1A, any number of game controllers 600 may be included in the game system 100. Similarly, any number of the other devices described herein may be included
15   in the game system 100 according to embodiments of the present invention.

In one embodiment of the present invention, a player device 200 communicates with a remote, Web-based game controller 600 (*e.g.*, a server) via the Internet. Although some embodiments of the present invention are described with respect to information exchanged using a Web site, according to other
20   embodiments information can instead be exchanged, for example, via: a telephone, an Interactive Voice Response Unit (IVRU), electronic mail, a WEBTV® interface, a cable network interface, and/or a wireless communication system.

The player device 200 and the game controller 600 may be any devices capable of performing the various functions described herein. The player device
25   200 may be, for example: a PC, a portable computing device such as a Personal Digital Assistant (PDA), a wired or wireless telephone, a one-way or two-way pager, a kiosk (*e.g.*, a game kiosk located at an airport terminal), an interactive television device, a game terminal (*e.g.*, a SONY PLAY STATION® video game terminal), or any other appropriate storage and/or communication device.

Note that the devices shown in FIG. 1A need not be in constant communication. For example, a player device 200 may only communicate with the game controller 600 via the Internet when appropriate (*e.g.*, when attached to a "docking" station or "cradle" coupled to a player's PC). Note also that a player

5   device 200 and the game controller 600 may be incorporated in a single device (*e.g.*, a game kiosk may act as both a player device 200 and the game controller 600).

According to an embodiment of the present invention, a player uses a player device 200 to communicate with the game controller 600. For example, a

10   player may use his or her PC to access a Web site associated with the game controller 600. The player may then play a game of skill (*e.g.*, a computer-based golf game associated with a physics simulation), such as by using a keyboard or mouse coupled to the PC to provide input parameters to the game controller 600.

As shown in FIG. 1A, a player may also attempt to use an automated game

15   playing device 260 to help him or her during game play. The automated game playing device 260 may be, for example, a modified game program or a separate software program that is being executed on the player device 200. For example, a player may create an automated game playing device 260 that analyzes information received by, or stored at, the player device 200 in order to evaluate a simulated

20   putting green terrain. The automated game playing device 260 may then calculate an optimal simulated swing for a player.

According to one embodiment, the game controller 600 also arranges for the player to provide a payment in exchange for game play and/or arranges for the player to receive a payment of one or more prize amounts. For example, the game

25   controller 600 may arrange for $1,000 to be paid to a player who correctly answers twenty trivia questions. A payment device 110 may be used to arrange for the player to provide and/or receive payments. For example, the game controller 600 may arrange for a player to purchase one or more game plays via the payment device 110 (*e.g.*, via a credit card account, a debit card account, a banking account,

30   or an electronic payment protocol). The payment device 110 may comprise, for example, a third party device (*e.g.*, a credit card processing device), a check

printer, and/or an Automated Clearing House (ACH) device (*e.g.*, when arranging to provide a "direct deposit" payment via a player's bank account).

Detailed Game System

FIG. 1B is a block diagram of a game system 102 wherein the game
5   controller 600 communicates with different types of player devices 200 via one or more communication networks 104. In particular, the player devices 200 comprise a PC 202, a PDA 204, a wireless telephone 206, and a television 208.

The game controller 600 may communicate with these devices, for example, via the Internet. According to other embodiments, the communication
10   networks 104 comprise one or more of a Local Area Network (LAN), a Metropolitan Area Network (MAN), a Wide Area Network (WAN), a proprietary network, a Public Switched Telephone Network (PSTN), a Wireless Application Protocol (WAP) network, a cable television network, and other types of Internet Protocol (IP) networks such as an intranet or an extranet. Moreover, as used
15   herein, communications include those enabled by wired or wireless technology. Note that the increasing ubiquity of Internet access, and the rapid growth of game playing online, may make the Internet a particularly fertile medium to develop a "cash for cash prizes" player experience.

Examples of some player devices 200 that may be used in connection with
20   the game systems 100, 102 will now be described in detail with respect to FIGS. 2 through 5.

Player Device

FIG. 2 illustrates a player device 200 that is descriptive of the devices shown in FIGS. 1A and 1B according to an embodiment of the present invention.
25   The player device 200 comprises a processor 210, such as one or more INTEL® Pentium® processors, coupled to a communication device 220 configured to communicate via a communication network (not shown in FIG. 2). The

communication device 220 may be used to communicate, for example, with the game controller 600 and/or the payment device 110.

The processor 210 is also in communication with an input device 240. The input device 240 may comprise, for example, a keyboard, a mouse or other

5   pointing device, a microphone, a knob or a switch (including an electronic representation of a knob or a switch), an infrared port, a docking station, and/or a touch screen. Such an input device 240 may be used, for example, by a player to play a game (*e.g.*, by manipulating a pointer associated with a computer-based golf game).

10   The processor 210 is also in communication with an output device 250. The output device 240 may comprise, for example, a display (*e.g.*, a computer monitor), a speaker, and/or a printer. The output device 250 may be used, for example, to provide game information to a player.

The processor 210 is also in communication with a storage device 230.

15   The storage device 230 may comprise any appropriate information storage device, including combinations of magnetic storage devices (*e.g.*, magnetic tape and hard disk drives), optical storage devices, and/or semiconductor memory devices such as Random Access Memory (RAM) devices and Read Only Memory (ROM) devices.

20   The storage device 230 stores a program 215 for controlling the processor 210. The processor 210 performs instructions of the program 215, and thereby operates in accordance with the present invention. For example, the processor 210 may arrange for a player to play a game of skill by receiving information from, and/or transmitting information to, a remote game controller 600.

25   As used herein, information may be "received" by or "transmitted" to, for example: (i) the player device 200 from the game controller 600; or (ii) a software application or module within the player device 200 from another software application, module, or any other source.

FIG. 3 illustrates a PC 202 displaying game information according to an embodiment of the present invention. The PC 202 includes a keyboard 242A and a mouse 242B which can be used by a player to play a game of skill. The PC 202 also includes a computer display 252A and speakers 252B which can be used, for example, to provide game information to a player.

FIG. 4 illustrates a PDA 204 displaying game information according to another embodiment of the present invention. The PDA 204 includes an input device 244 and an output device 254 (*e.g.*, a display screen) that may be used by a player to play a game. Similarly, FIG. 5 illustrates a wireless telephone 206 including an input device 246 and an output device 256 displaying game information.

Game Controller

FIG. 6 illustrates a game controller 600 that is descriptive of the device shown in FIGS. 1A and 1B according to an embodiment of the present invention. The game controller 600 comprises a processor 610, such as one or more INTEL® Pentium® processors, coupled to a communication device 620 configured to communicate via a communication network (not shown in FIG. 6). The communication device 620 may be used to communicate, for example, with one or more player devices 200 and/or the payment device 110.

The processor 610 is also in communication with a storage device 630. The storage device 630 may comprise any appropriate information storage device, including combinations of magnetic storage devices (*e.g.*, magnetic tape and hard disk drives), optical storage devices, and/or semiconductor memory devices such as RAM devices and ROM devices.

The storage device 630 stores a program 615 for controlling the processor 610. The processor 410 performs instructions of the program 415, and thereby operates in accordance with the present invention. For example, the processor 610 may arrange for a player to provide payment of a fee in exchange for playing a

game of skill. The processor may also receive a player input parameter from a remote player device 200 and determine a game result based on the player input parameter and a value. The value may be, for example, generated at the game controller 600 without being communicated to the remote player device 200 prior

5   to the determination of the game result. The processor 610 may then arrange for the player to receive a prize based on the game result. Such an approach may limit a player's ability to unfairly produce a game result using an automated game playing device (*e.g.*, because the game result is not based solely based on information available at a remote player device).

10   The program 615 may be stored in a compressed, uncompiled and/or encrypted format. The program 615 may furthermore include other program elements, such as an operating system, a database management system, and/or device drivers used by the processor 410 to interface with peripheral devices.

As used herein, information may be "received" by or "transmitted" to, for

15   example: (i) the game controller 600 from the player device 200; or (ii) a software application or module within the game controller 600 from another software application, module, or any other source.

As shown in FIG. 6, the storage device 630 also stores a player database 700 (described with respect to FIG. 7), a game play database 800 (described with

20   respect to FIG. 8), and a game database 900 (described with respect to FIG. 9). Examples of databases that may be used in connection with the game systems 100, 102 will now be described in detail with respect to FIGS. 7 through 9. The illustrations and accompanying descriptions of the databases presented herein are exemplary, and any number of other database arrangements could be employed

25   besides those suggested by the figures.

Player Database

Referring to FIG. 7, a table represents the player database 700 that may be stored at the game controller 600 according to an embodiment of the present

invention. The table includes entries identifying players who play games of skill via the game system 100, including members of a test group of players and/or the general public. The table also defines fields 702, 704, 706, 708, 710 for each of the entries. The fields specify: a player identifier 702, a name 704, contact

5   information 706, a payment identifier 708, and an account balance 710. The information in the player database 700 may be created and updated, for example, based on information received from player when he or she registers with the game controller 600. The information in the player database 700 may also be based on, for example, information generated as players play games of skill via the game

10   system 100.

The player identifier 702 may be, for example, an alphanumeric code associated with a player who has registered to use the game system 100. The player identifier 702 may be generated by, for example, the game controller 600 or the player (*e.g.*, when the player provides a user name and password). According

15   to one embodiment, the player identifier 702 is also stored on a remote player device 200 (*e.g.*, as part of a browser "cookie" file). The player database 700 also stores the name 704 and contact information 706 (*e.g.*, a postal address, an electronic mail address, an IP address, or a telephone number) associated with each player.

20   The payment identifier 708 may comprise, for example, a credit card, debit card or bank account number (*e.g.*, a checking account number) or digital payment protocol information. The payment identifier 708 may be used, for example, by the game controller 600 to arrange for the player to provide or receive a payment.

The account balance 710 represents an amount that has been provided by

25   the player (*e.g.* via his or her credit card account) in exchange for game play and/or an amount that has been (or will be) provided to the player based on his or her performance (*e.g.*, a total amount that has been won by the player). The account balance 710 may be increased, for example, when a player provides a fee in exchange for game play and when a player wins a prize. The account balance 710

30   may be decreased, for example, when he or she plays a game and when payment is

provided to the player (*e.g.*, he or she receives a check representing an amount won during the month).

Game Play Database

Referring to FIG. 8, a table represents the game play database 800 that may
5   be stored at the game controller 600 according to an embodiment of the present invention. The table includes entries identifying games that have been played by players via the game system 100. The table also defines fields 802, 804, 806 for each of the entries. The fields specify: a game play identifier 802, a player identifier 804, and a game result 806. The information in the game play database
10   800 may be created and updated, for example, based on information generated as players play games of skill via the game system 100.

The game play identifier 802 may be, for example, an alphanumeric code associated with a game that has been played by a player. The game play identifier 802 may be generated, for example, by the game controller 600. The player
15   identifier 804 may be, for example, an alphanumeric code associated with a player who has registered to use the game system 100. The player identifier 804 may be based on, or associated with, the player identifier 702 stored in the player database 700.

The game result 806 may represent an amount that has been, or will be,
20   provided to a player based on his or her performance in a game of skill (*e.g.*, a prize awarded to the player based on game play). According to another embodiment, the game result 806 instead represents one or more goals achieved by a player, such as a total score. The game provider may analyze the game results 806 stored in the game play database 800 to evaluate a game design (*e.g.*, based on
25   game results 806 generated by a sample group of players and/or after the game has been released to the general public). The game provider may, for example, determine that a particular payout structure will not be (or is not) profitable and/or that game results 806 are determined predominantly by a player's skill.

Game Database

Referring to FIG. 9, a table represents the game database 900 that may be stored at the game controller 600 according to an embodiment of the present invention. The table includes entries identifying games of skill that may be available via the game system 100. The table also defines fields 902, 904 for each of the entries. The fields specify: a game identifier 902 and a total game result 904. The information in the game database 900 may be created and updated, for example, based on information generated as players play games of skill via the game system 100.

The game identifier 902 may be, for example, an alphanumeric code associated with a game that may be available via the game system 100. Note that the game identifier 902 may be associated with the game play identifier 802 stored in the game play database 800. For example, the game play identifier 802 may comprise the game identifier 902 concatenated with an identifier associated with a particular game that was played.

The total game result 904 represents a total amount that has been, or will be, paid by a game provider based on players' performance in the game of skill (*e.g.*, prizes awarded to players based on game play). According to another embodiment, the total game result 904 instead represents goals achieved players, such as an average total score.

Game System Method

FIG. 10 is a flow chart of a method for facilitating game play according to an embodiment of the present invention. The method may be performed, for example, by the game controller 600 in connection with a game of skill associated with a physics simulation, such as a computer-based golf game. Other examples of games that may be associated with a physics simulation include an archery game, a moving water game (*e.g.*, a whitewater rapids game), a racing game, a fishing game, a sports game (*e.g.*, a baseball, basketball, football, soccer, or hockey game),

a bowling game, a billiards game, a throwing game, a ring-toss game, a shooting game, or a space game.

At 1002, the game controller 600 arranges to receive a fee from a player in exchange for game play. For example, the game controller 600 may use the payment identifier 1208 stored in the player database 700 to arrange for the player to provide twenty dollars in exchange for game play (e.g., for the right to play forty games or the right to play games for thirty minutes). The game controller 600 may also update the account balance 1210 stored in the player database 700.

At 1004, the game controller 600 receives one or more player input parameters from a remote player device 200. For example, the game controller 600 may receive a speed and angle associated with a swing of a simulated golf club from a player's PC via the Internet.

At 1006, the game controller 600 determines a game result while inhibiting or hampering the use of an automated game playing device 260. For example, the game controller 600 may calculate a trajectory for a simulated golf ball based on the player input parameter received at 1004 and a value that has not been transmitted to the player device 200, such as a wind speed and direction. Other examples of values that may used include atmospheric information, terrain information, and object information (e.g., an irregularity in a simulated golf ball's shape).

According to one embodiment, the value is randomly generated by the game controller 600. According to another embodiment, the undisclosed value is not randomly generated. For example, the game controller 600 may generate the value by receiving actual wind speed and direction information from a golf course (further removing the perception that "randomness" or "chance" is associated with the game result). As another example, the game controller 600 can generate the value by retrieving a pre-stored value from a database. According to still another embodiment, a multi-player format is utilized to introduce a value that cannot be determined by the remote player device 200 and/or an automated game playing

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device 260. For example, a first player may select a wind speed and direction for a second player.

As a result of the value not being transmitted to the player device 200, an automated game playing device 260 would be unaware of, and unable to account

5   for, the value.

The game provider may want to make sure that the player's skill in the game is more significant to the determination of a game result than the real-world forces. The level of skill required may be associated with proficiency in reading and interpreting the putting green, estimating the correct force and direction to hit

10   the golf ball, and hand-eye coordination needed to properly input the desired force.

Moreover, the game provider may want to ensure that game results, and any simulations and values used to produce those game results (*e.g.*, wind speeds), can be audited and verified by outside experts (*e.g.*, a physics expert may review a physics simulation).

15   Note that a game based in part on real world probabilities may effectively limit an expert player's advantage. Consider a computer-based golf simulation in which a player is awarded a large prize if he or she shoots a "hole-in-one." In this case, the likelihood of even an expert player shooting a hole-in-one may be small enough (*e.g.*, one in a million) so as to prevent expert players from dominating the

20   game. As described herein, a game design can also incorporate one or more variable elements to prevent expert players from completely mastering the game. For example, a variable, undisclosed wind speed and direction may be used to further limit an advantage enjoyed by expert players.

At 1008, the game controller 600 determines if a prize has been won by the

25   player based on the game result. For example, the game controller 600 may determine if a simulate golf ball has come to rest within a predetermined distance of a simulated golf hole. If the player has won a prize, the game controller 600 arranges for the player to receive payment of a prize amount at 1010. The game controller 600 may also update the account balance 710 stored in the player

database 700, the game result 806 stored in the game play database 800, and/or the total game result 904 stored in the game database 900.

Additional Embodiments

The following illustrates various additional embodiments of the present invention. These do not constitute a definition of all possible embodiments, and those skilled in the art will understand that the present invention is applicable to many other embodiments. Further, although the following embodiments are briefly described for clarity, those skilled in the art will understand how to make any changes, if necessary, to the above-described apparatus and methods to accommodate these and other embodiments and applications.

Although most of the embodiments described herein are associated with a game controller 600 generating an additional value that is used to determine a game result, such a function may instead be performed by a player device 200. For example, a first player may use a first player device 200 to input a wind speed and direction that is used when determining a game result for a second player at a second player device 200.

Similarly, although embodiments of the present invention are described with respect to games of skill associated a single player, according to other embodiments the games of skill are instead associated with multiple players. For example, a set of players (*e.g.*, members of a family or a "team" of players) may be play a game of skill as described herein.

In some of the embodiments described herein, a check may be mailed to a player based on an amount won during game play. However, payments can also be provided to the player in other ways. For example, a game provider may give a player a payment card that the player uses to collect winning amounts via, for example, an Automated Teller Machine (ATM) device.

The present invention has been described in terms of several embodiments solely for the purpose of illustration. Persons skilled in the art will recognize from

this description that the invention is not limited to the embodiments described, but may be practiced with modifications and alterations limited only by the spirit and scope of the appended claims.